

TOWN OF KITTERY

Sewer Department

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Town Manager

Energy Conservation Summary:

The Kittery Sewer Department been implementing a plan to conserve energy for the 21 pump stations and the main treatment plant. The pump stations were outfitted with variable frequency drives, in doing so has reduced the cost of running the pumps considerably. Reducing the infiltration in the piping infrastructure that contributes to the stations has reduced the time the pumps run for an additional savings. This also had another benefit in maintenance cost reduction. The heating cost of these stations during winter can double electric cost. Starting this year we are insulating four stations a year to increase our efficiency. In 2007 the main treatment plant underwent a major upgrade in equipment and repair. Fine bubble diffusers were installed, dissolved oxygen sensors were installed, VFDs installed for the blowers. These components communicate and work together for efficiency in process control and energy savings. SEA consultants has designed these projects which resulted in the town of Kittery Sewer Department receiving incentive checks from The Efficiency Maine Program in excess of a \$100,000 dollars. Fuel for heating the main plant and out buildings was too high and hard to budget for, the way there heated with old technology was wasteful. We are now changing the heating system over to pellet boilers. This should result in a net savings of 40 to 50% in fuel cost and contribute to the local economy. The energy costs have reduced in the last four years by \$40,000 dollars and expect to continue to reduce in the coming years. A reflective roof will be installed for reduction of cooling cost in summer and a free installation of solar panels for an additional savings in electricity. There preliminary plans to install a water turbine at the outfall of our effluent discharge and connect the power to the largest pump station Kittery for energy savings.

Sincerely Yours

George Kathios
Superintendant
Town of Kittery Sewer Department